

Application No. 10/560,644
Armdt. Dated: July 29, 2008
Reply to Office Action Dated: April 29, 2008

REMARKS/ARGUMENTS

The Examiner is thanked for the Office Action mailed April 29, 2008. The status of the application is as follows:

- Claims 1-15 are pending, claims 9-12 have been withdrawn from consideration, and claims 1, 2, 5, 7 and 14 have been amended;
- Claims 7 and 8 are rejected under 35 U.S.C. 112, second paragraph;
- Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Viebranz et al. (US 5,756,936);
- Claims 1-4 and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Negle (EP 1176856); and
- Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Negle (EP1176856) in view of Allen et al. (US 6,541,534).

The objections and rejections are discussed below.

Restrictions/Elections

The Office asserts that the application contains claims directed to more than one species of the generic invention. Particularly, the Office asserts that the claims correspond to the following species: Species I: Claims 2-8; and Species II: Claims 9-12. The Office has required applicant to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. During a telephone conversation on April 23, 2008 with applicant's representative, Yan Glickberg, a provisional election was made with traverse to prosecute the invention of Species I, claims 1-8 and 13-15. Applicant hereby affirms the election with traverse to prosecute the invention of Species I, claims 1-8 and 13-15.

The Rejection of Claims 7 and 8 under 35 U.S.C. 112, Second Paragraph

Claims 7 and 8 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Particularly, the Office asserts that there is insufficient antecedent basis for the limitation "the basic substance" in claims 7 and 8. Claim 7 has been amended to give the

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limitation “the basic substance” proper antecedent basis in claims 7 and 8. Accordingly, this rejection should be withdrawn.

The Rejection of Claims 1-6 under 35 U.S.C. 102(b)

Claims 1-6 stand rejected under 35 U.S.C. 102(b) as being anticipated by Viebranz et al. Independent claim 1 has been amended to include additional claim aspects to distinguish claim 1 over Viebranz et al. Particularly, claim 1 has been amended to include claim aspects that the insulating material is comprised of at least a first material comprising a foam material; at least one second material distributed within the first material, the insulating material being contained in a casing of a high voltage device configured for insulating components of the device; and the insulating material has an electrical conductivity and/or dielectric constant which is changed by adding the second material such that when it is used in the device, surface charge which gathers on the components of the device is substantially dissipated by increased electrical conductivity of the insulating material at least such that voltage flashovers are prevented between the components. The prior art does not teach or suggest these claim aspects.

Viebranz et al. discloses a cylindrical radially shrinkable sleeve (10) for enclosing a connection or end termination of an electrical cable having an insulation surrounded by the shielding layer. The sleeve (10) has an outer shielding layer (16) of semi-conductive material and at least an insulation layer (14) on the inner side of the shielding layer (16). The radially innermost layer is of a homogenous material having a relative dielectric constant which is larger than that of the insulation of the cable. The material is of a matrix of dielectric plastic material containing microspheres which are electrically conductive either totally or only at the outer surface thereof, and which have a diameter between 10 and 500 µm. The microspheres are uniformly mixed into the matrix material, with the compound having a dielectric constant equal to or larger than 3 and a dielectric strength of at least 5kV/mm. (see Abstract)

Viebranz et al. does not teach or suggest that either the outer shielding layer (16) or the insulation layer (14) is an insulating material comprised of at least a first material comprising a foam material and at least one second material distributed within the first material, the insulating material being contained in a casing of a high voltage device configured for insulating components of the device, wherein the insulating material has an electrical conductivity and/or

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dielectric constant which is changed by adding the second material such that when it is used in the device, surface charge which gathers on components of the device is substantially dissipated by increased electrical conductivity of the insulating material at least such that voltage flashovers are prevented between the components as is required by claim 1. Particularly, Viebranz et al. does not disclose the insulating material being contained in a casing of a high voltage device configured for insulating components of the device, wherein the insulating material has an electrical conductivity and/or dielectric constant which is changed by adding the second material such that when it is used in the device, surface charge which gathers on components of the device is substantially dissipated by increased electrical conductivity of the insulating material at least such that voltage flashovers are prevented between the components. Accordingly, applicant respectfully submits that claim 1 is allowable, and this rejection should be withdrawn.

Claims 2-4 and 6 depend from claim 1 and are allowable at least by virtue of their dependency upon an allowable base claim.

Claim 5 depends from claim 1 and requires that the spherical particles are formed of a ceramic and/or phenolic resin and/or acrylonitrile copolymer. Viebranz et al. does not teach or suggest that the spherical particles are formed of a ceramic and/or phenolic resin and/or acrylonitrile copolymer. Accordingly, applicant respectfully submits that claim 5 is allowable, and this rejection should be withdrawn.

The Rejection of Claims 1-4 and 13-15 under 35 U.S.C. 102(b)

Claims 1-4 and 13-15 stand rejected under 35 U.S.C. 102(b) as being anticipated by Negle. Independent claim 1 has been amended to include additional claim aspects. Particularly, claim 1 has been amended to include claim aspects that the insulating material has an electrical conductivity and/or dielectric constant which is changed by adding the second material such that when it is used in the device, surface charge which gathers on the components of the device is substantially dissipated by increased electrical conductivity of the insulating material at least such that voltage flashovers are prevented between the components. The prior art does not teach or suggest these claim aspects.

Negle discloses a high-voltage generator provided with a hybrid insulation which is formed with a high resistance foam (30 to 35) and an insulating liquid (50). The foam is shaped

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and arranged in such a manner that there are formed channels (40 to 50) wherethrough the insulating liquid (50) can flow in areas requiring discharge of heat or an electric strength stronger than can be endured by the high-resistance foam alone. (see Abstract) The insulating members (30 to 35) are made of a microporous high-resistance foam. The high-resistance foam contains a large number of micro spheres (bubbles) that are formed by a polymer envelope and enclose a gas. In the initial state these spheres have a diameter of approximately 10 μm . Under the influence of heating of the high-resistance foam the spheres expand to a diameter of up to 40 μm , depending on temperature. Because the electric breakdown strength of such a high resistance foam is determined essentially by the diameter of the spheres, the high-resistance foam is heated to such a temperature only that an optimum value is obtained for the electric strength as well as the desired electric constant. (see col. 4, lines 23-35)

Negle does not teach or suggest that the high-resistance foam (30 to 35) is an insulating material that has an electrical conductivity of which is changed by adding the second material such that when it is used in the device, surface charge which gathers on components of the device is substantially dissipated by increased electrical conductivity of the insulating material at least such that voltage flashovers are prevented between the components as is required by claim 1. Accordingly, applicant respectfully submits that claim 1 is allowable, and this rejection should be withdrawn.

Claims 4 and 13-15 depend from claim 1 and allowable at least by virtue of their dependency upon an allowable base claim.

Claim 2 depends from claim 1 and requires that the second material is formed by at least essentially spherical particles which in terms of their size and/or their material and/or coating and/or their filling and/or their fraction with respect to the overall insulating material are selected and dimensioned such that a desired electrical conductivity of the insulating material is obtained. Negle does not teach or suggest that the spherical particles are added to the high-resistance foam to obtain a desired electrical conductivity of the insulating foam as is required by claim 2. Accordingly, applicant respectfully submits that claim 2 is allowable, and this rejection should be withdrawn.

Claim 3 depends from claim 1 and requires that the spherical particles are hollow spheres with a diameter of up to about 100 μm . As previously discussed, Negle discloses that the

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diameter of the hollow spheres are initially 10 μm , and expand up to a diameter of 40 μm upon heating. Negle does not teach or suggest that the diameter of the hollow spheres is up to about 100 μm as is required by claim 3. Accordingly, applicant respectfully submits that claim 3 is allowable, and this rejection should be withdrawn.

The Rejection of Claims 7 and 8 under 35 U.S.C. 103(a)

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Negle in view of Allen et al. This rejection should be withdrawn because the combination of Negle and Allen et al. does not teach or suggest all of the limitations of the subject claims and, therefore, fails to establish a *prima facie* case of obviousness with respect to the subject claims.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.
In re Royka, 490 F.2d 981, (CCPA 1974). MPEP §2143.03.

Claim 8 depends from independent claim 1 and requires the spherical particles are embedded in a basic substance to which there is added an adhesion promoter for improving the adhesion between the particles and the basic substance. The Office asserts that Allen et al. teaches a polyurethane foam for use in automotive applications in which hollow microspheres such as glass or polymeric spheres are integrated into a polyurethane foam via coating the spheres with adhesion promoter such as a silane compound (col. 8, lines 30-31). However, Allen et al. does not teach or suggest adding an adhesion promoter to the basic substance for improving the adhesion between the particles and the basic substance as is required by claim 8. Accordingly, applicant respectfully submits that claim 8 is allowable, and this rejection should be withdrawn.

Claim 7 depends from claim 1 and is allowable at least by virtue of its dependency upon an allowable base claim.

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Conclusion

In view of the foregoing, it is submitted that the claims distinguish patentably and non-obviously over the prior art of record. An early indication of allowability is earnestly solicited.

Respectfully submitted,

Michael J. Corrigan

Michael J. Corrigan, Reg. No. 42,440

Anthony M. Del Zoppo, III Reg. No. 51,606

Driggs, Hogg, Daugherty & Del Zoppo Co., L.P.A.

38500 Chardon Road

Willoughby Hills, Ohio 44094

Phone: 1.440.391.5100

Fax: 1.440.391.5101

Direct all correspondence to:

Yan Glickberg, Reg. No. 51,742

Philips Intellectual Property & Standards

595 Miner Road

Cleveland, Ohio 44143

Phone: 1.440.483.3455

Fax: 1.914.323.0615